256187
RECORD NO.

122804
SHAUGHNESSEY NO

REVIEW NO.

EEB REVIEW

DATE: IN 12-26-89 OUT 12-27-89

FILE OR REG. NO. 90-FL-03

PETITION OR EXP. NO.

DATE OF SUBMISSION 12-15-89

DATE RECEIVED BY EFED 12-30-89

RD REQUESTED COMPLETION DATE 12-30-89

EEB ESTIMATED COMPLETION DATE 12-30-89

RD ACTION CODE/TYPE OF REVIEW 510

TYPE PRODUCT(S) Insecticide

DATA ACCESSION NO(S)

PRODUCT MANAGER, NO. Tompkins (41)

PRODUCT NAME(S) Agri-Mek 0.15 EC

COMPANY NAME Florida

SUBMISSION PURPOSE Section 18 use on celery in Florida to control two-spotted spider mite

SHAUGHNESSEY NO.	CHEMICAL	% A.I.

ECOLOGICAL EFFECTS BRANCH REVIEW
SECTION 18

Avermectin

100 Section 18 Application

100.1 Nature and Scope of Emergency

The State of Florida requests a specific exemption to use Avermectin on celery. The crisis occurred because of the warm and dry weather, pest populations on susceptible crops grown in close proximity, alternate weed hosts on ditch banks and longer pre-harvest intervals of registered pesticides.

100.2 Target Organism two-spotted spider mites

100.3 Date, Duration 1989-1990 Growing Season

100.4 Application Methods, Direction, Rates

Use rate would be 0.01 to 0.02 lb ai/acre. Initial application would begin once threshold levels of five motile mites per trifoliate leaf is reached, and continue until control is achieved. Applications up to 0.02 lb ai/acre can be made at 7 - day intervals not to exceed 0.2 lb ai/acre/season (10 applications). A 7-day preharvest interval is required. According to the label, application would be with conventional dilute or concentrate ground sprayers calibrated to deliver sufficient water for thorough coverage.

100.5 Treatment Area

It is estimated that 1,200 acres of celery in central Florida could be treated.

100.6 Precautionary Labeling

"This product is toxic to fish and wildlife. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment washwater or rinsate."

"This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area."

101 Hazard Assessment

101.1 Discussion

Avermectin would be applied to celery in central Florida at up to 0.02 lb ai/acre every 7 days up to 10 times. Ground application only is assumed based on the label directions.

The EEB has previously reviewed the proposed Section 3 registration for use of avermectin on celery, see review dated 1-27-89.

101.2 Likelihood of Adverse Effects on Nontarget Organisms

This proposed use has been thoroughly evaluated in a previous review (1-27-89) with regards to potential hazard to nontarget organisms. Based on that evaluation, birds, fish and aquatic invertebrates are expected to experience minimal effects. Effects to aquatic organisms are unlikely because ground application will result in minimal drift and transport via runoff is expected to be minimal. Young mammals may be acutely affected and mammal reproduction may be affected. Residues on many food items exceed the concentration necessary to exceed the level which caused affects in a 10-day oral test with pregnant mice. Chronic exposure is considered likely since multiple applications are recommended.

101.3 Endangered Species Considerations

See review dated 1-27-89.

Summary

Exposure levels do not exceed avian toxicity concern levels for endangered birds. Because this use is for ground application only, impact to endangered bird aquatic food supply (invertebrates and fish) is unlikely.

No listed mammals, invertebrates, or fish are expected to be exposed to avermectin because of this use.

101.4 Adequacy of Data

The available data were not adequate to fully quantify the risks of this section 18 to nontarget organisms. However, there are sufficient data to generally characterize the hazard of using avermectin on celery.

The lacking data are field studies to determine effects to mammals.

101.5 Adequacy of Labeling

The labeling is adequate.

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103 Conclusions

The EEB has reviewed the Section 18 emergency exemption for use of avermectin on celery in Florida. In the 1200 acre area where this would be used, acute and chronic impact to mammals are expected. Birds, fish and aquatic organisms are not expected to be impacted. No effects to endangered species are expected.

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